**Dr. Tianyu Cui, University of Shanghai for Science and Technology, China**

**Bio:**

Dr. Tianyu Cui is a lecturer and a master's supervisor in the Department of Industrial Design at the College of Publishing, University of Shanghai for Science and Technology. He obtained his Ph.D. in Consumer and Design Sciences from Auburn University, USA, and had post-doc research experience of 3D printed wearable products at the Hong Kong Polytechnic University.

Dr. Cui’s research areas include 3D printed wearable product design, data visualization design, user research, and research of AIGC application in design. He hosted a National Foreign Expert Project of the Ministry of Science and Technology, China in 2022. He has published 4 SSCI/EI indexed papers, and guided students to win 15 awards in high-level design competitions recognized by the Ministry of Education, China, including one second prize in a national competition.

**Title:**

Can AIGC Facilitate Design Education? A Study of Aesthetic Judgment on Data Visualization Design regarding Chinese Intangible Cultural Heritages

**Abstract:**

Artificial Intelligence-Generated Content (AIGC) image tools have been applied in diverse design fields and proved to be able to facilitate the design process and improve design efficiency. However, few previous studies have focused on applying AIGC image tools in the design education of data visualization design, specifically regarding the topic of Chinese intangible cultural heritages (ICHs). Contributing to filling this research gap, this study examined whether AI-generated data visualization design posters regarding the topic of Chinese ICHs are no worse than Human-generated ones in aesthetic judgment (beauty and novelty) from three design dimensions: layout design, design elements, and color design. An AIGC image tool, Stable Diffusion, was used to generate posters to be compared with a student’s poster from a design workshop regarding data visualization design of Chinese ICH topics. Design-majored students (N=84) were invited to take an online survey concerning the research topic. Results from paired-samples t tests indicated that, regarding beauty evaluations, AI-generated posters were partially proved to be as good as the human-generated one in three design dimensions. Regarding novelty evaluations, all three AI-generated posters were proved to be as good as the human-generated one in all three design dimensions. The results suggest that AIGC image tools have the potential to facilitate the data visualization design process regarding Chinese ICHs to generate high-quality references for design education, enhance design efficiency, and help preserve and promote Chinese ICHs.